

# A Bayesian Exploration of Growth and Convergence

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The topic of economic growth and convergence of countries has been an active topic in the 1990's. This paper investigates the question of whether there is any empirical evidence that countries are converging, with respect to their relative incomes, over time. To test for convergence, the evolution of the relative income for a country is modelled as a first-order Markov chain. Bayesian methods are then used to investigate the posterior distributions of the parameters of the Markov chain and of other functions of interest related to the Markov chain. Issues of embeddability and mobility are discussed and Bayes factors are used to test for evidence of convergence across the countries in our sample. This is achieved through the use of carefully constructed prior distributions for the transition probabilities of the Markov chain. Contrary to existing studies we find little evidence in support of convergence of countries either across the whole data set or conditionally across subsets of countries that we believe are similar in underlying production technologies. We find that there is strong evidence that countries are diverging with respect to their relative income even for the conditional case. We also find that there is strong evidence of a structural break in the data around 1974 and that the properties of the Markov chain change significantly when this break is taken into account for all but "poor" countries.

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